

Supplementary Table S2. Genome wide comparisons among 18 insect-associated fungi.

Strains	Host range	Genome size (Mb)	Predicted gene models	Signal peptide	Transmembrane helices	PHI genes	Source	NCBI accession
<i>Metarhizium robertsii</i>	Generalist: Insecta	39.0	11,688	1,707	11,022	3,858	Hu et al. 2014 (46)	ADNJ00000000/JGI
<i>Metarhizium acridum</i>	Specialist: Locust	38.1	9,849	1,212	9,136	3,268	Gao et al. 2011 (29)	ADNI00000000
<i>Ophiocordyceps unilateralis</i>	Specialist: Formicidae	26.1	7,821	1,209	6,456	2,411	de Bekker et al. 2015 (26)	LAZP01000000
<i>Ophiocordyceps sinensis</i>	Specialist: Hepialidae	120	6,972	895	5,183	2,094	Hu et al. 2013 (47)	ANOV00000000
<i>Beauveria bassiana</i>	Generalist: Insecta	33.7	10,364	1,486	10,568	3,371	Xiao et al. 2012 (27)	ADAH00000000
<i>Cordyceps militaris</i>	Generalist: Insecta	32.2	9,651	1,323	10,250	3,114	Zheng et al. 2011 (45)	AEVU00000000
<i>Conidiobolus coronatus</i>	Generalist: Insecta	39.9	10,635	1,438	9,313	2,709	Chang et al. 2015 (48)	JXYT00000000
<i>Conidiobolus thromboides</i>	Generalist: Insecta	24.6	8,867	1,103	7,786	2,474	Arnesen et al. BioRxiv (50)	JGI
<i>Basidiobolus meristosporus</i>	Generalist: Insecta/Amphibia	89.5	16,111	2,409	15,443	5,041	Mondo et al. 2017 (49)	JGI
<i>Smittium culicis</i> ID-206-W2	Generalist: Diptera	71.0	10,024	753	5,035	1,965	Wang et al. 2016 (38)	LSSM00000000
<i>Smittium culicis</i> GSMNP	Generalist: Diptera	77.1	11,209	952	6,200	2,313	Wang et al. 2016 (38)	LSSN00000000
<i>Smittium mucronatum</i>	Specialist: <i>Psectrocladius</i>	102.4	8,712	700	4,550	1,725	Wang et al. 2016 (38)	LSSL00000000
<i>Furculomyces boomerangus</i>	Generalist: Diptera	28.1	7,338	729	5,525	1,990	Present study	MBFT00000000
<i>Smittium angustum</i>	Generalist: Diptera	28.1	7,821	716	5,232	2,018	Present study	MBFU00000000
<i>Smittium simulii</i>	Generalist: Diptera	43.9	6,519	673	3,599	1,471	Present study	MBFR00000000
<i>Smittium megazygosporum</i>	Generalist: Diptera	43.6	7,132	593	4,383	1,774	Present study	MBFS00000000
<i>Capniomyces stellatus</i>	Specialist: <i>Allocaupnia</i>	24.8	6,649	792	4,440	1,763	Wang et al. 2016 (39)	LUVW00000000
<i>Zancudomyces culisetae</i>	Generalist: Diptera	28.7	7,387	693	4,565	1,905	Wang et al. 2016 (38)	LSSK00000000